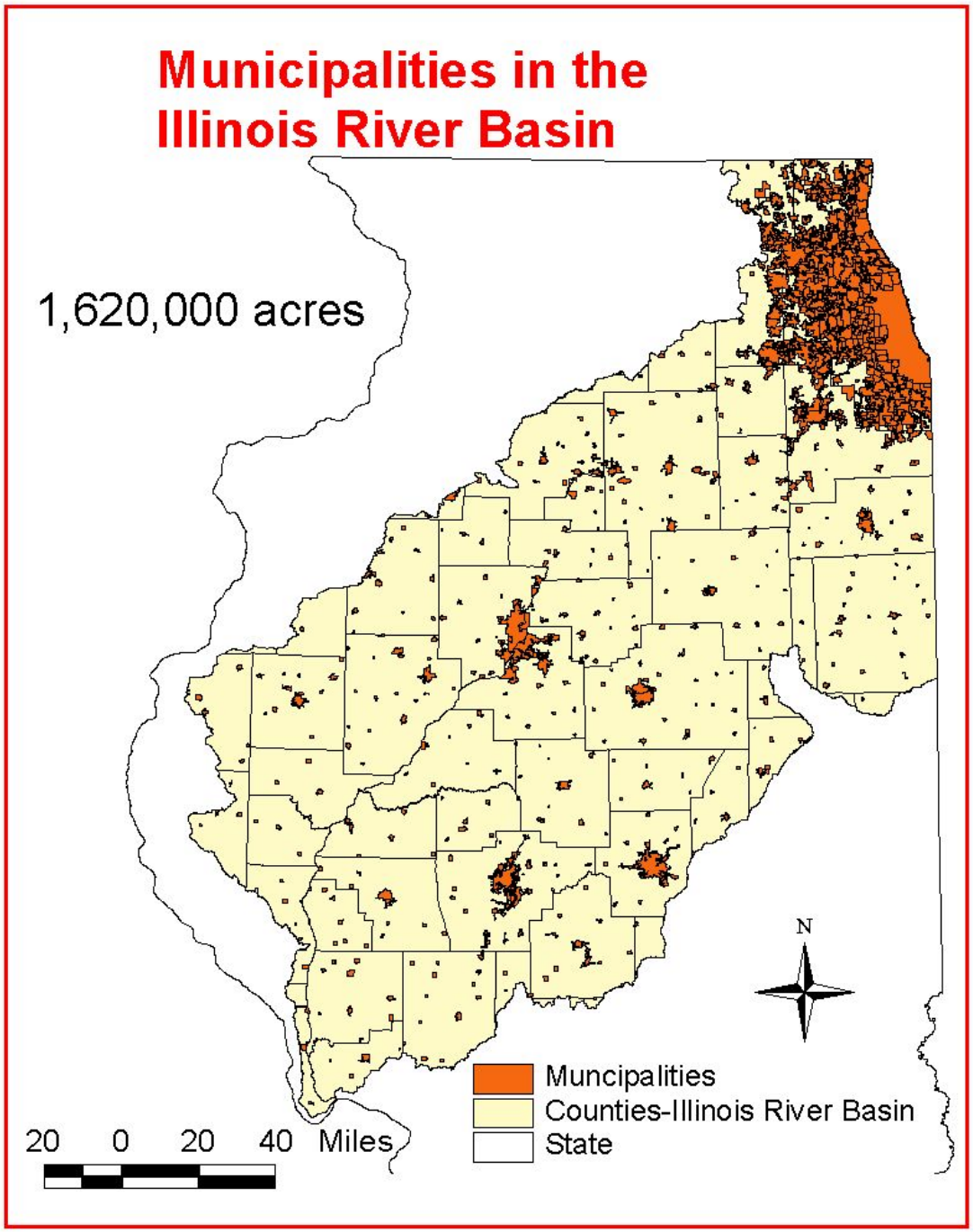
The Illinois Conservation Reserve Enhancement Program (CREP)

A Model For Floodplain Restoration

Illinois River Basin Restoration "Vision"

- A naturally diverse and productive Illinois River Basin that is sustained by natural ecological processes and managed to provide for compatible social and economic activities.

Source: Integrated Management Plan for the Illinois River Watershed (1997)



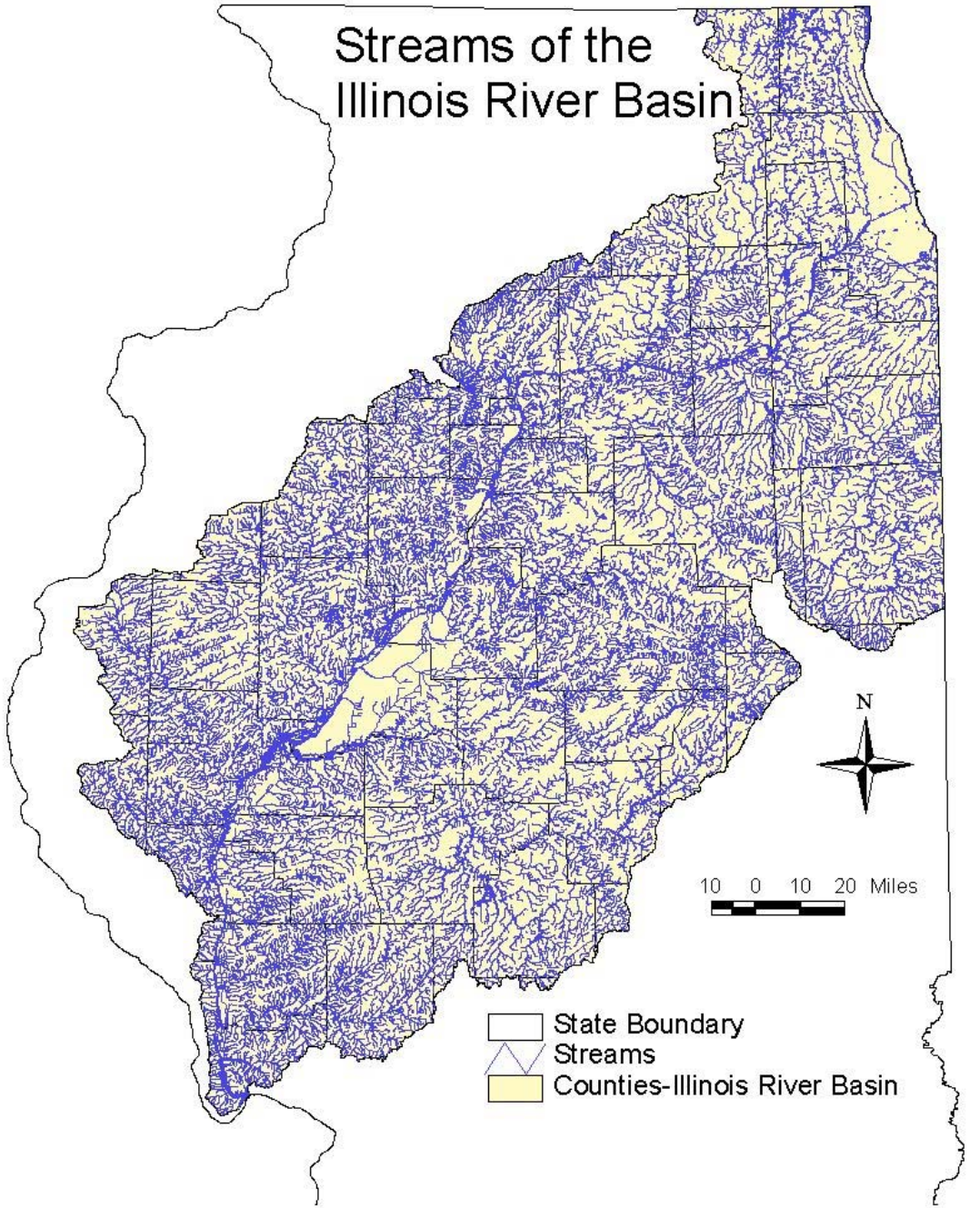
Some Illinois River Basin Statistics

- **Geographic Area: 15,707,000 acres or 24,543 miles^2**
  - **Greater area than 8 other states.**
- **Population:**

  Approximately 10 million people (based on 2000 Census).
  - **Greater than 40 other states**
  - **Greater than 27 European countries and approximately that of 7 other countries.**

More Illinois River Basin Statistics

- **Stream Miles**: 29,700 (source: ISWS)
  or equivalent to 10.7 trips from New York to Los Angeles



Overview of the landscape

Agricultural	10.5 million
Rural grassland	2.3 million
Forest	1.7 million
Grassland	1.6 million
Urban (low to high density)	1.5 million

Remainder in various other habitats such as open water, wetland, etc.

USDA-FSA

- CREP (105,206 ac)
- CRP (287,020 ac)

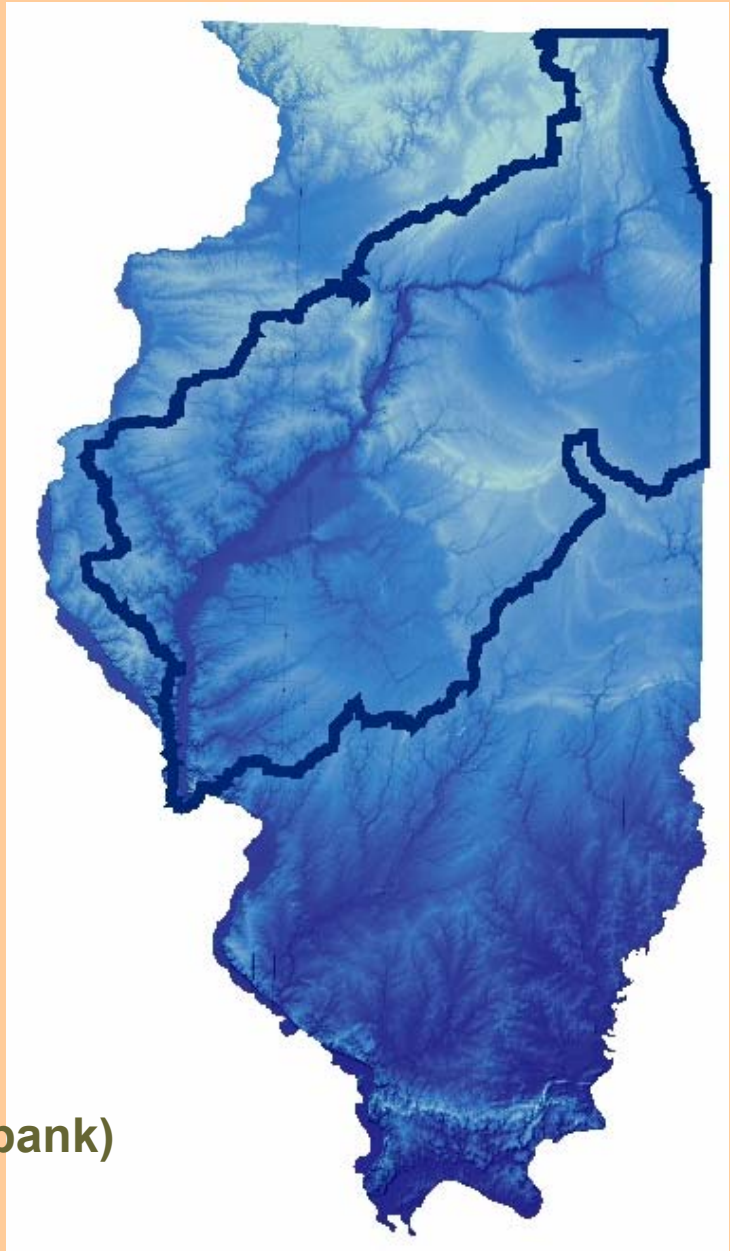
IDNR

- State CREP (58,353ac)
- C2000 Ecosystem program (~50,000ac
- Illinois Rivers 2020

IDA

In 2001, statewide:

- CPP (35,264 ac)
- SSRP (4.5 mi streambank)



USDA-NRCS

- EQIP (2,857contracts thru 2001)
- WHIP (8,712ac statewide thru mid-2001)
- WRP

IEPA

- Section 319 NPS Program

Nature Conservancy

Current restorations:

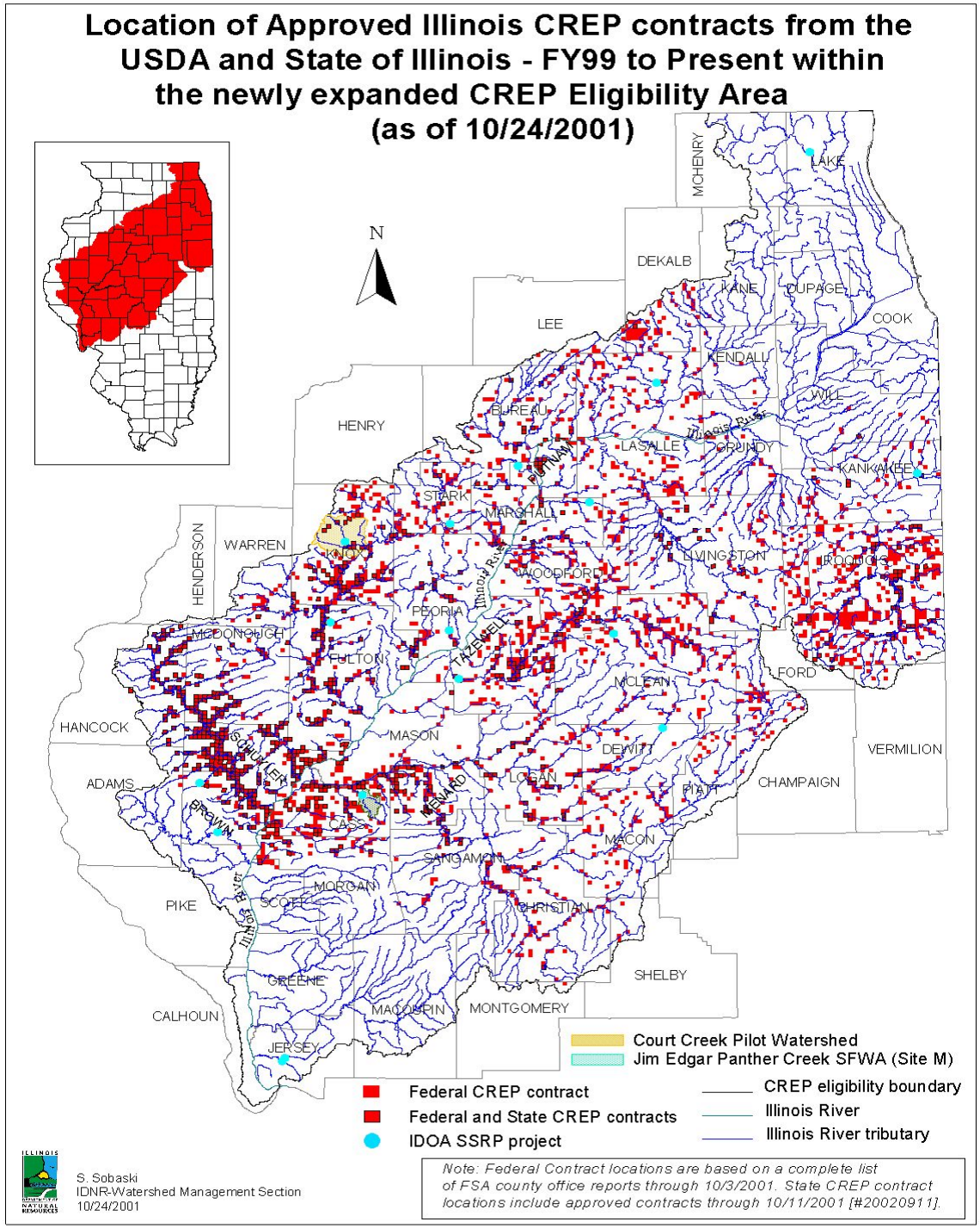
- Emiquon
- Spunky Bottoms
- Mackinaw River

Magnitude of conservation activities

Program	Acres	Total cost (mill)
CRP	287,020	
CREP	110,000	$300
WRP,EQIP,WHIP	296,906	$9.88
IEPA - 319		
IDOA SSRP, CPP		$2.38
IDNR - C2000		$3.10
NGO's (e.g., TNC)		$13.0

- 110,000 acres have been enrolled into 15 year CRP contracts on the Federal Side of the Program.

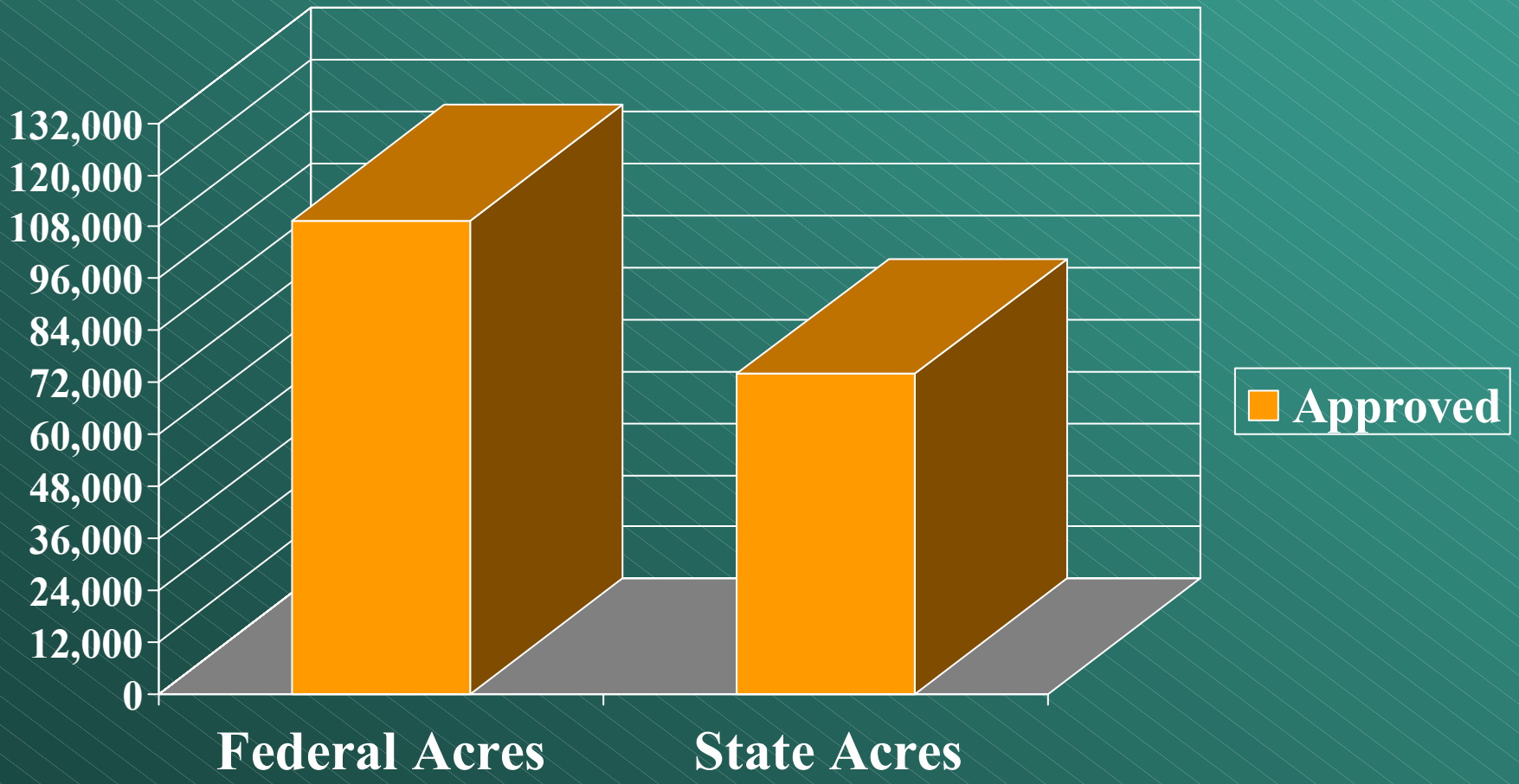
- The State Side of the program has enrolled 74,089 acres into conservation easements Ninety percent or 69,077 acres are perpetual easements.



CREP Enrollment Options

- Federal 15 Year CRP Contract
- State Offers 3 Options: 15 Year Extension, 35 Year Extension, or Permanent Easement
- Landowner Does Not Have to Enroll in a State Option

CREP ENROLLMENT



Expenditures

- The State has appropriated $51.5 M to date for match for 132,000 acres
- USDA has committed $262 M
- The next 100,000 acres will cost an estimated $250 M
- $48M State/$202 M Federal
- Every State dollar leverages four Federal Dollars

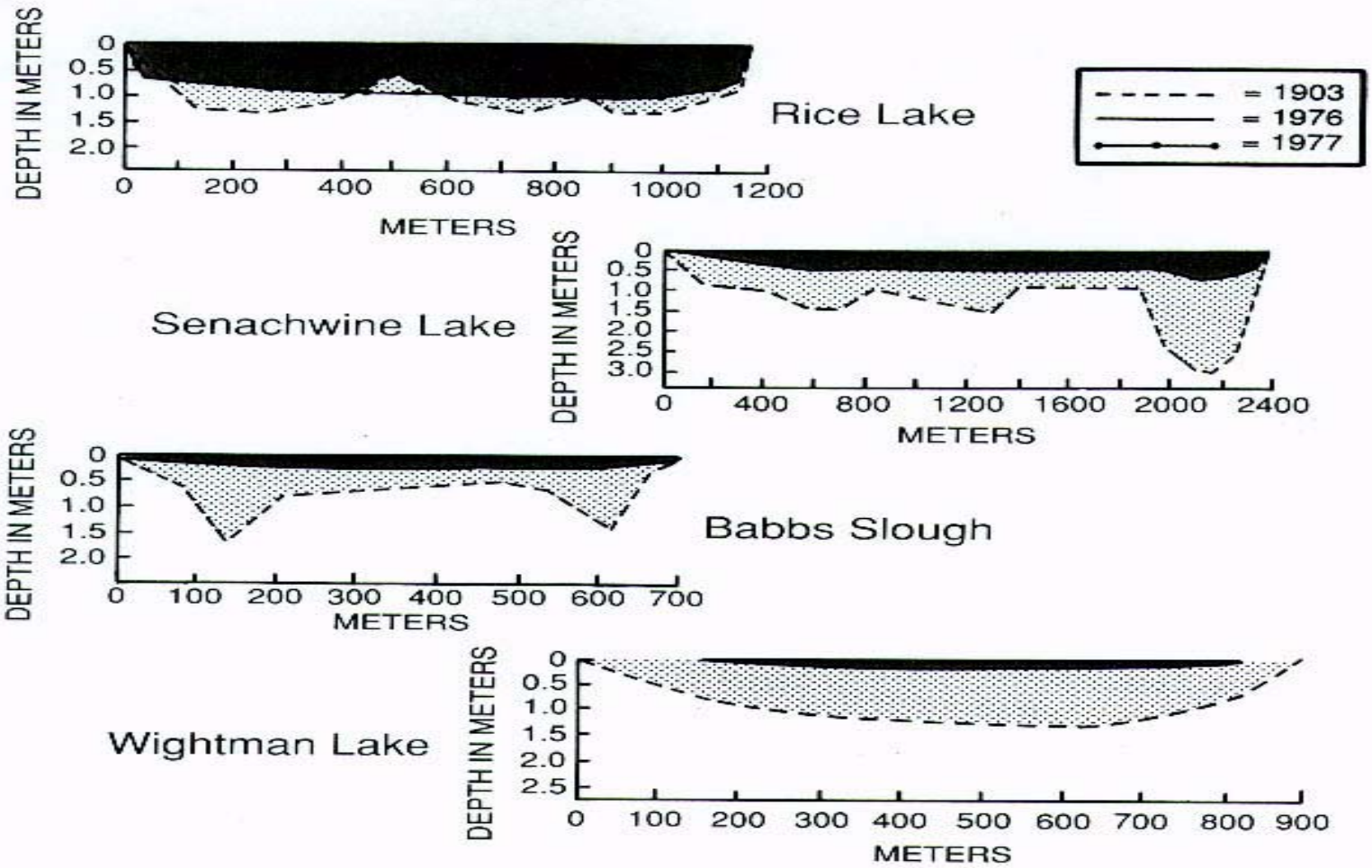
Goals of Illinois CREP

- Reduce Sedimentation in Illinois River 20%
- Reduce Nutrients by 10%
- Increase Populations of Waterfowl, Shorebirds, and Nongame Grassland Birds by 15%
- Increase Native Fish and Mussel Stocks in the Lower Reaches by 10%

Sedimentation impacts can be easily seen, but some impacts are below the surface of the water… in critical habitat.

Up to 90% of the volume in the 54 backwater lakes along the Illinois River has been lost to sedimentation.

Backwater Lake Restoration



Bottom contours of back-water lakes along the middle river, 1903 and 1976-77.

Illinois State Water Survey.

Sediment Budget of the Illinois River

- Average annual sediment delivery to the Illinois River valley – *12.1 million tons*
- Average annual sediment discharge at Valley City – *5.4 million tons*
- Average annual sedimentation – *6.7 million tons*
- Percent deposited – *55%*
- The Spoon and La Moine Rivers had the highest sediment yield rates for the period of analysis.

Illinois CREP Components

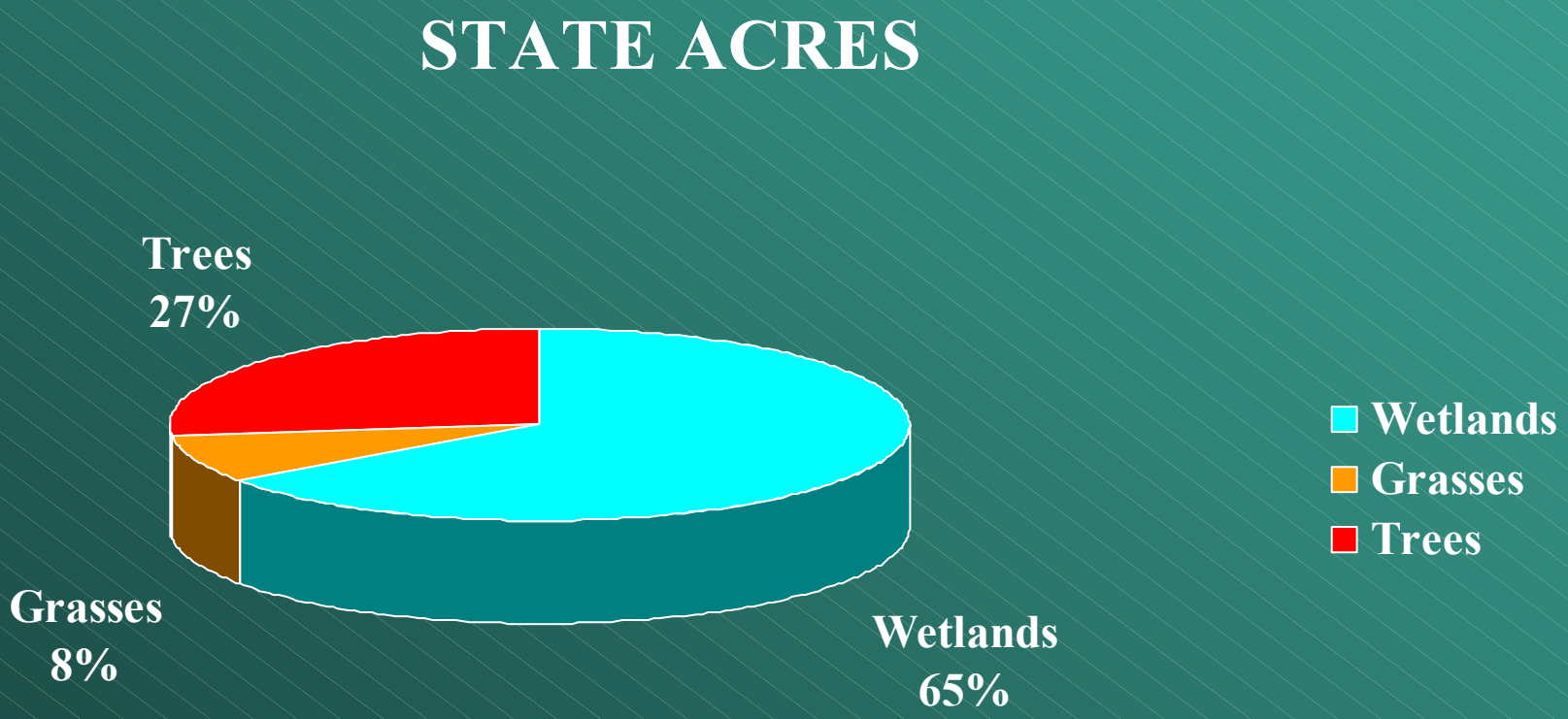
- Targets Riparian Areas defined as the 100 Year Floodplain
- Targets HEL land $\geq$ 12 and is Adjacent to the Floodplain
- Targets Wetland Restorations Throughout the Eligible Area
- Focuses on Native Vegetation

Illinois CREP Practices

Practice – CP Code	Acres
Wetland Restoration - CP23	33,545
Wildlife Habitat - CP4D	29,488
Riparian Buffers - CP22	19,684
Filter Strips - CP21	16,261
Hardwood Tree Planting - CP3A	3,488
Native Grasses – CP2	2,515
Rare and Declining Habitat - CP25	1,601

CREP RESTORATIONS BY TYPE

CREP RESTORATIONS BY TYPE



CREP is Restoring and Protecting Large Areas of Floodplain

- Average Size of State Enrollment is 66 Acres
- Many Large Contiguous Tracts in Permanent Easements
- Ability to Target Areas Around Critical Habitats, State and Federal Areas, and Other Sites

Floodplain Restoration

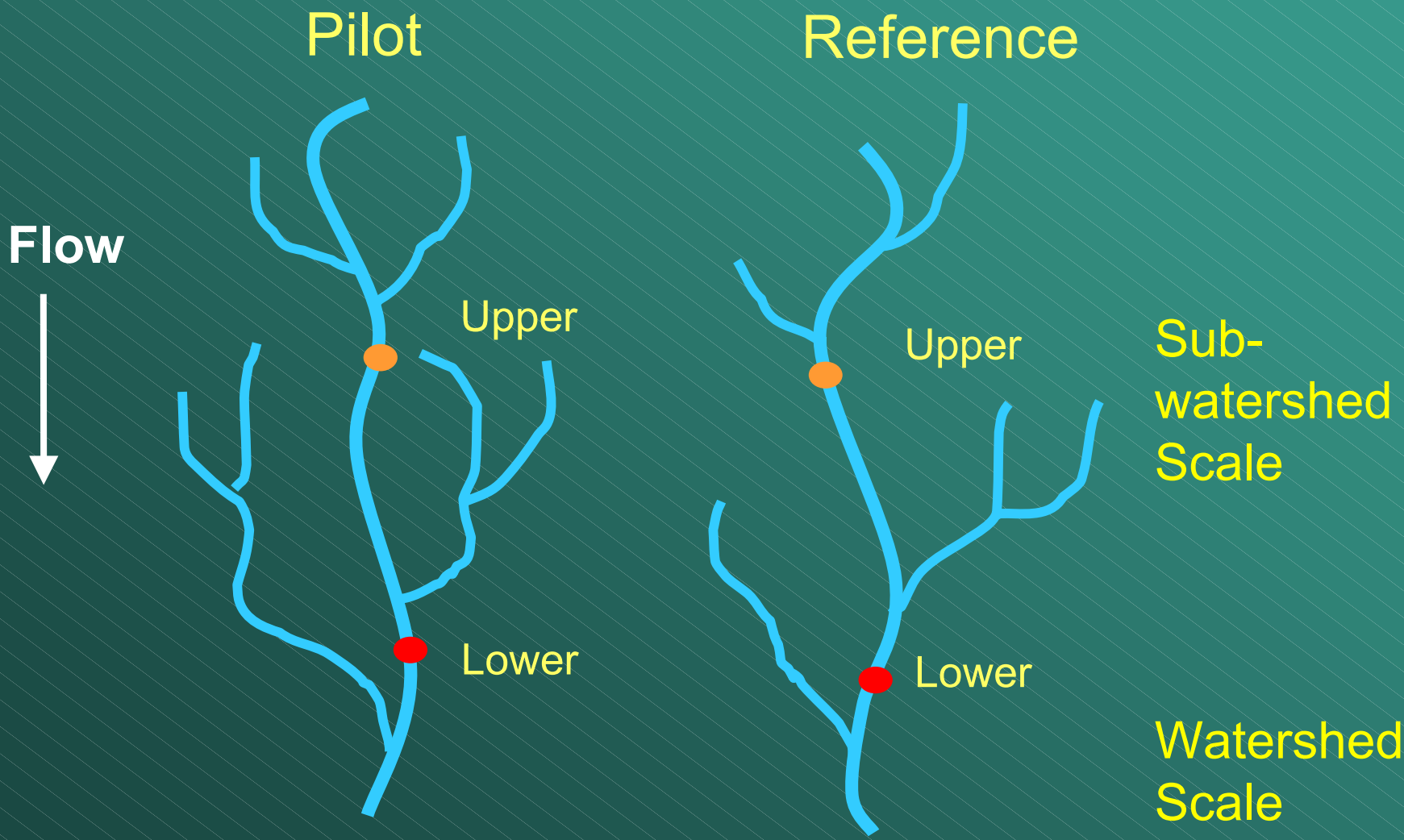
Tributary Sediment Reduction

Riparian & Aquatic Restoration

CREP
Monitoring and Assessments

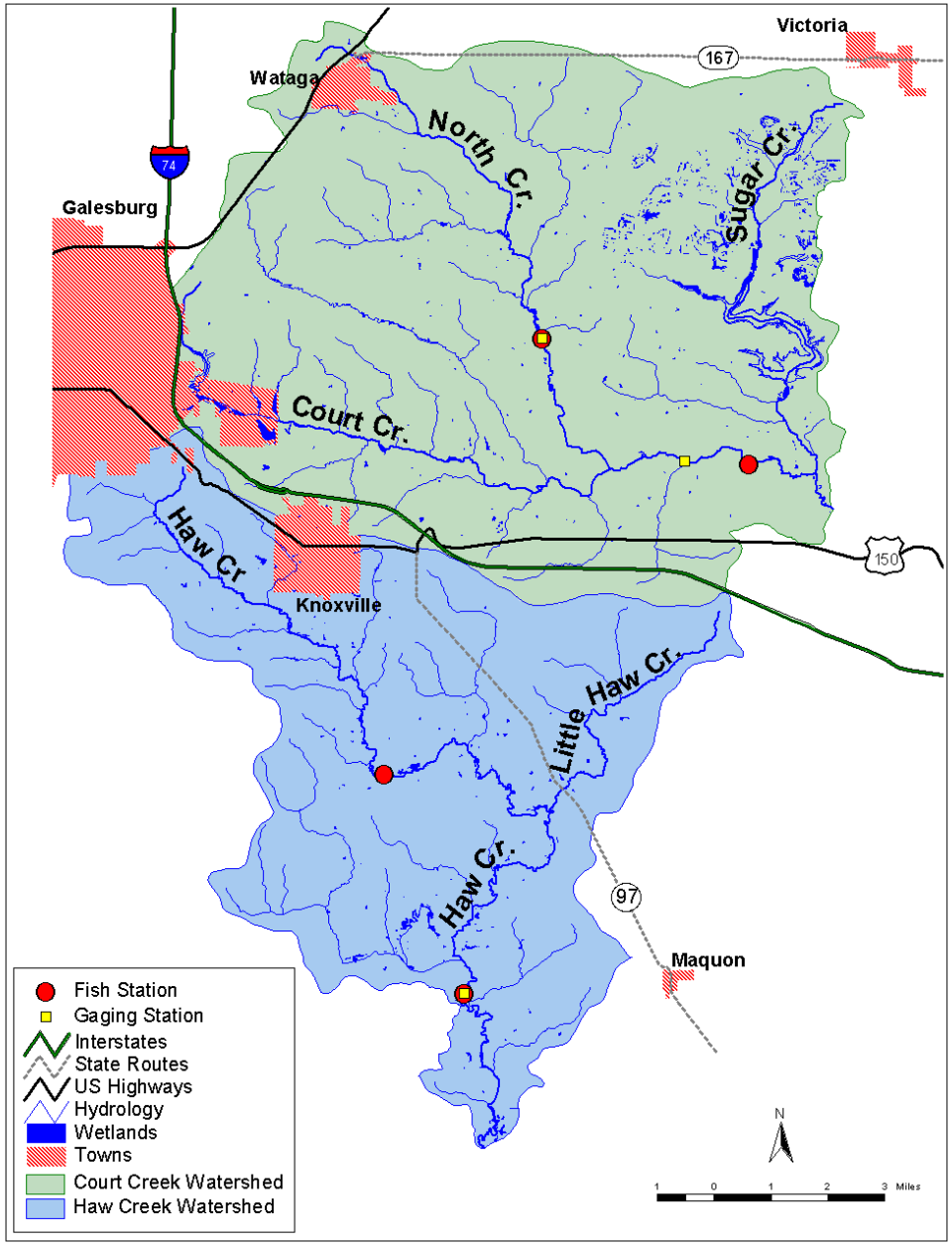
- Stream flow
- Water quality (sediment, nutrients)
- Instream and near-stream habitat
- Fish
- Macroinvertebrates
- Stakeholder views
- Erosion modeling

Watershed Pairing Design



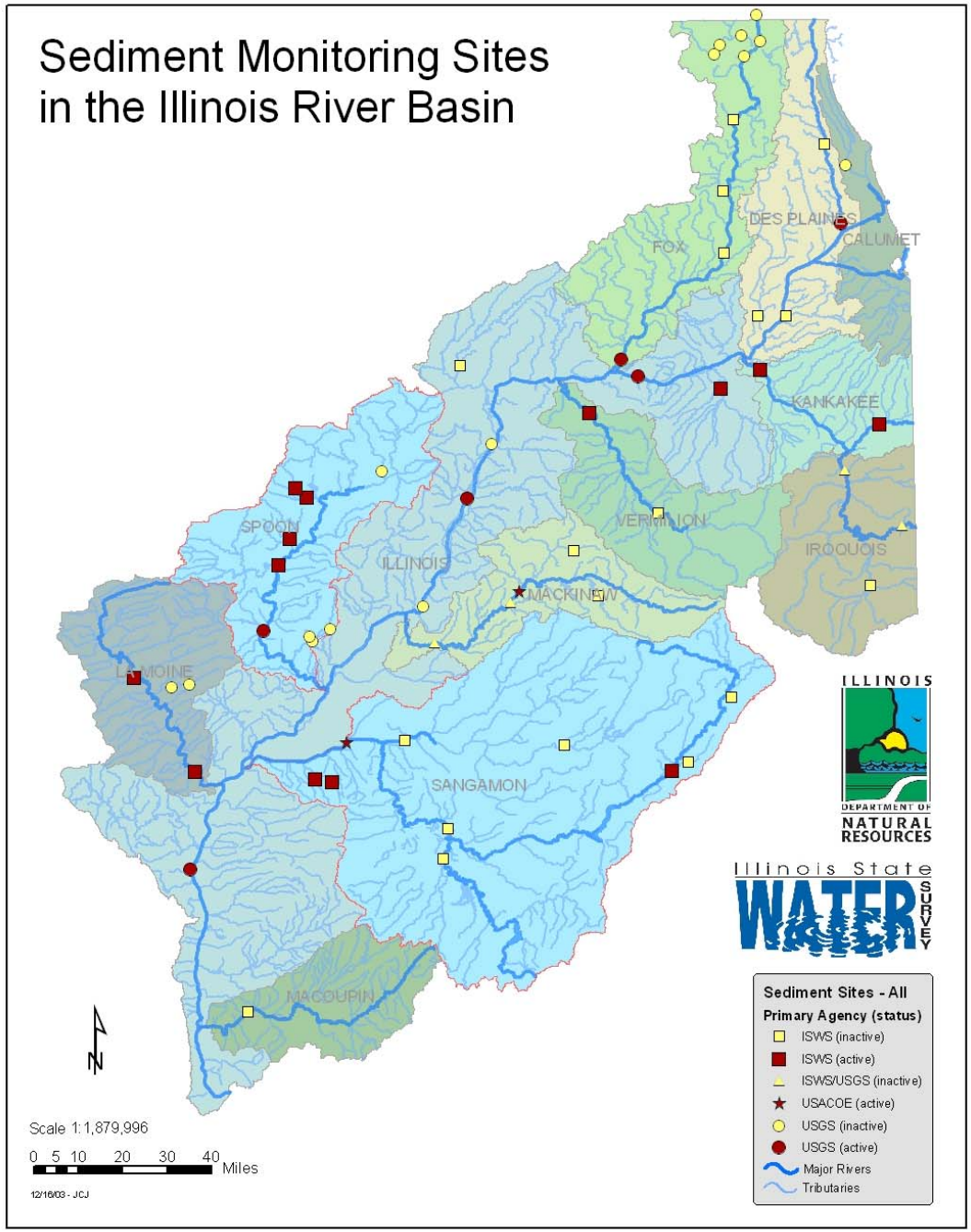
Issues:

- Available historical data
- Court Creek diverse and is applicable to other watersheds
- Very high stakeholder interest
- Illinois River trib., sediment, and water quality



Court Creek (Pilot)

Haw Creek (Reference)

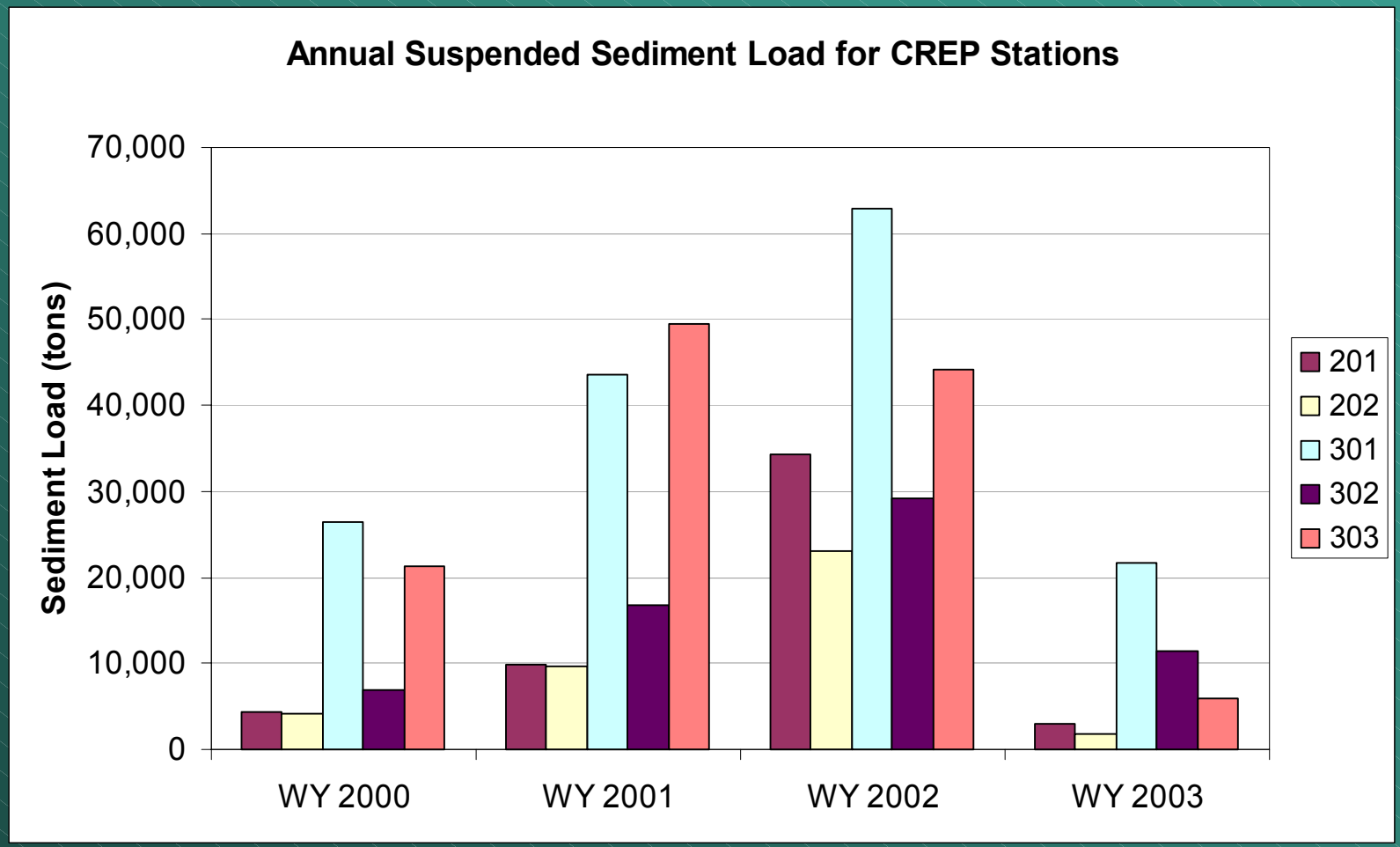

Sediment Monitoring Sites
in the Illinois River Basin
DES PLAINES
CALUMET
FOX
KANKAKEE
VERMILION
IROQUOIS
SPOON
ILLINOIS
MACKINAW
LA MOINE
SANGAMON
MACOUPIN
ILLINOIS
DEPARTMENT OF
NATURAL
RESOURCES
Illinois State
WATER SURVEY
Sediment Sites - All
Primary Agency (status)
ISWS (inactive)
ISWS (active)
ISWS/USGS (inactive)
USACOE (active)
USGS (inactive)
USGS (active)
Major Rivers
Tributaries
N
Scale 1:1,879,996
0 5 10 20 30 40
Miles
12/16/03 - JCJ

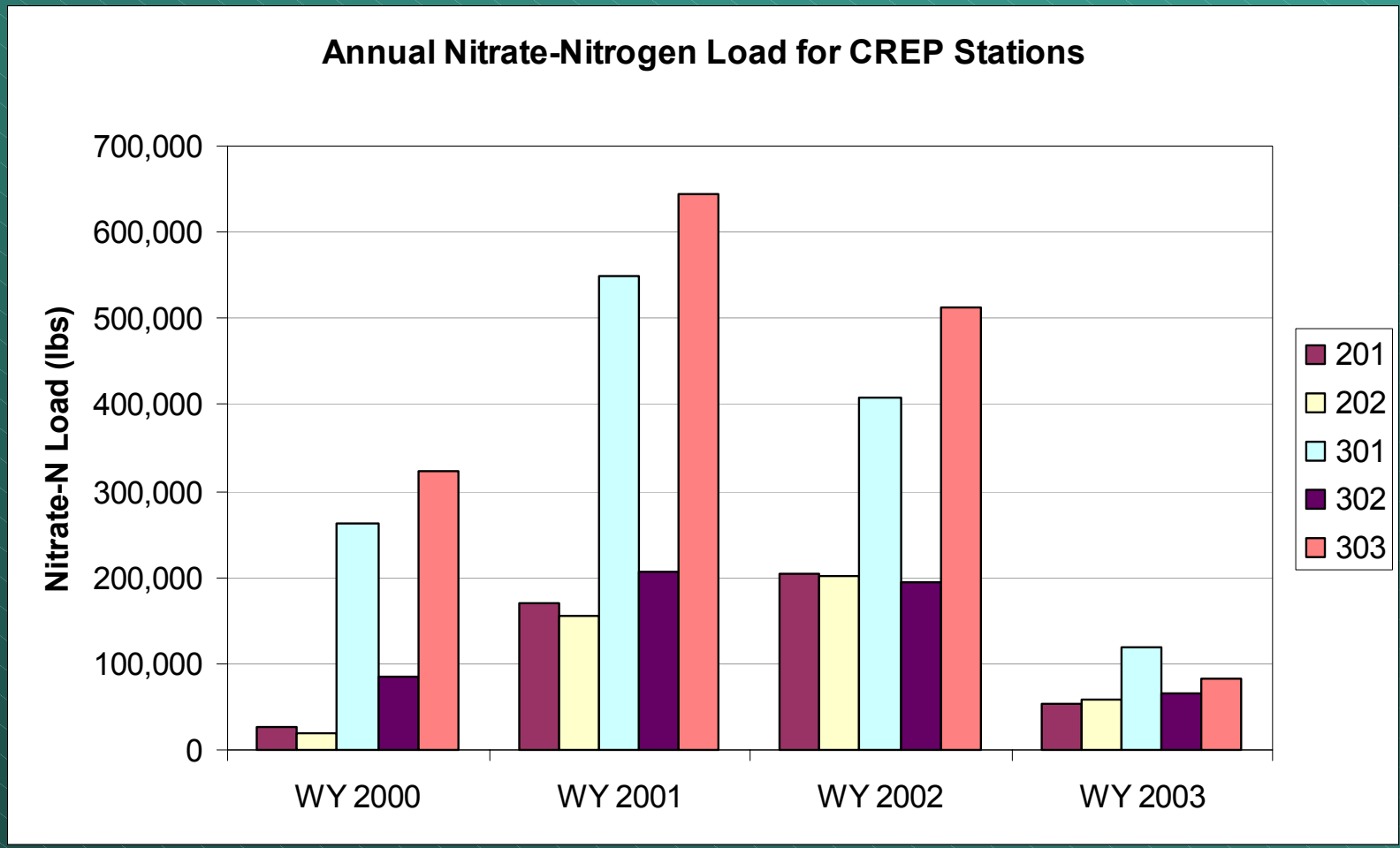
CREP Monitoring Stations

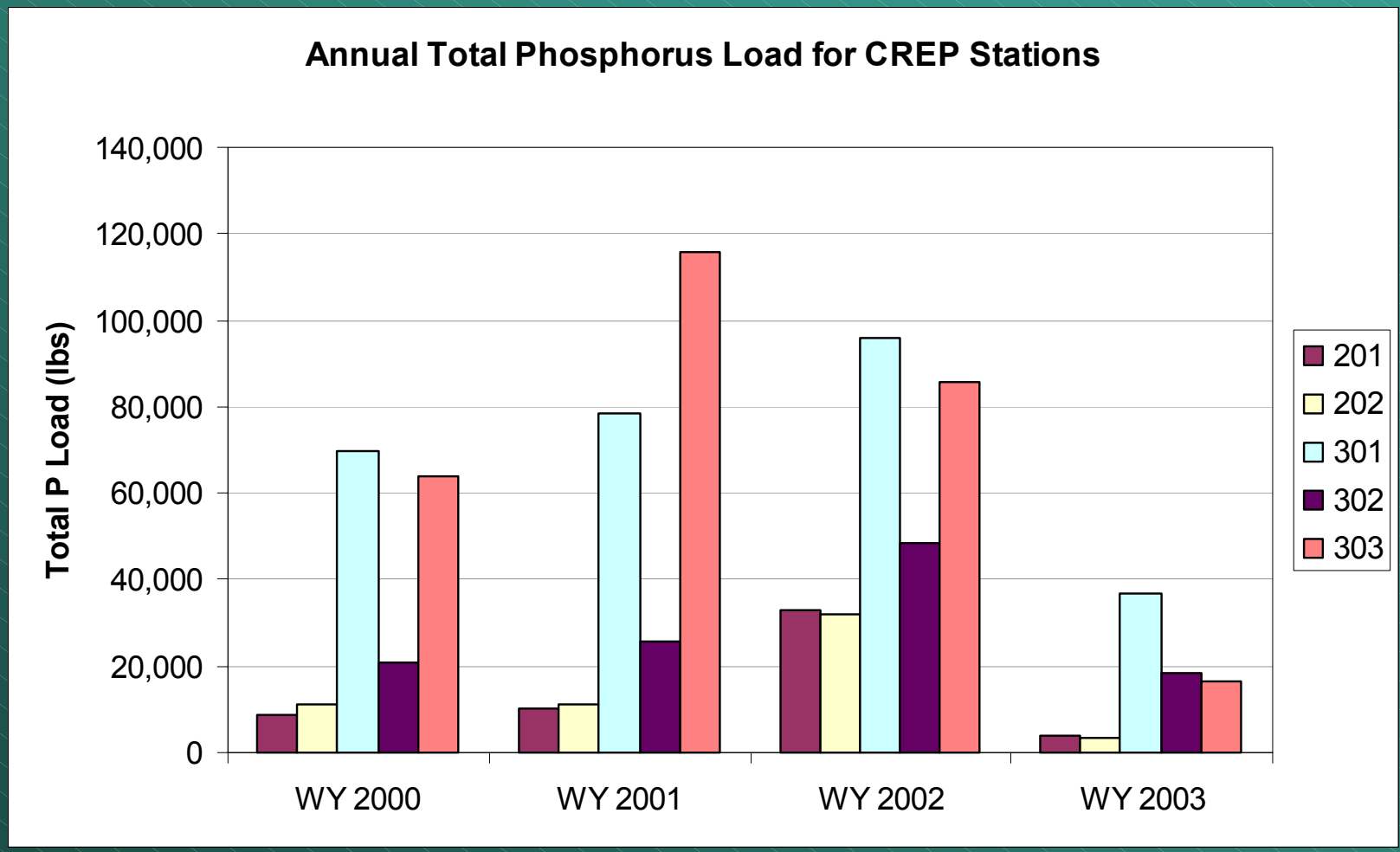
Site ID	Name	Drainage Area
301	Court Creek	66.4 sq mi / 172 sq km
302	North Creek	26.0 sq mi / 67.4 sq km
303	Haw Creek	55.2 sq mi / 143 sq km
201	Panther Creek	16.5 sq mi / 42.7 sq km
202	Cox Creek	12.0 sq mi / 31.1 sq km

Parameters Analyzed and Frequency of Sampling

Parameter	*Daily*	*Weekly (Tier I)*	*Monthly (Tier II)*	*During storm events*
Suspended Sediment	*	*	*	*
Nitrate-N		*	*	*
Ammonium-N		*	*	*
Orthophosphate		*	*	*
Nitrite-N			*	*
Total Kjeldahl Nitrogen (TKN)			*	*
Total Phosphorus			*	*
Total dissolved Phosphorus			*	*

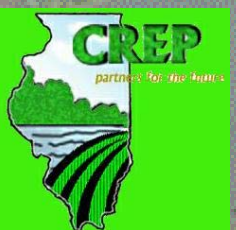

Annual Suspended Sediment Load for CREP Stations
Sediment Load (tons)
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
WY 2000
WY 2001
WY 2002
WY 2003
201
202
301
302
303

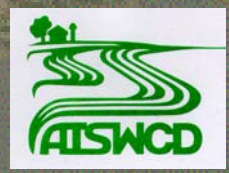

Annual Nitrate-Nitrogen Load for CREP Stations
Nitrate-N Load (lbs)
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
WY 2000
WY 2001
WY 2002
WY 2003
201
202
301
302
303


Annual Total Phosphorus Load for CREP Stations
Total P Load (lbs)
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
WY 2000
WY 2001
WY 2002
WY 2003
201
202
301
302
303

The Illinois Conservation Practices Tracking System (ICPTS)

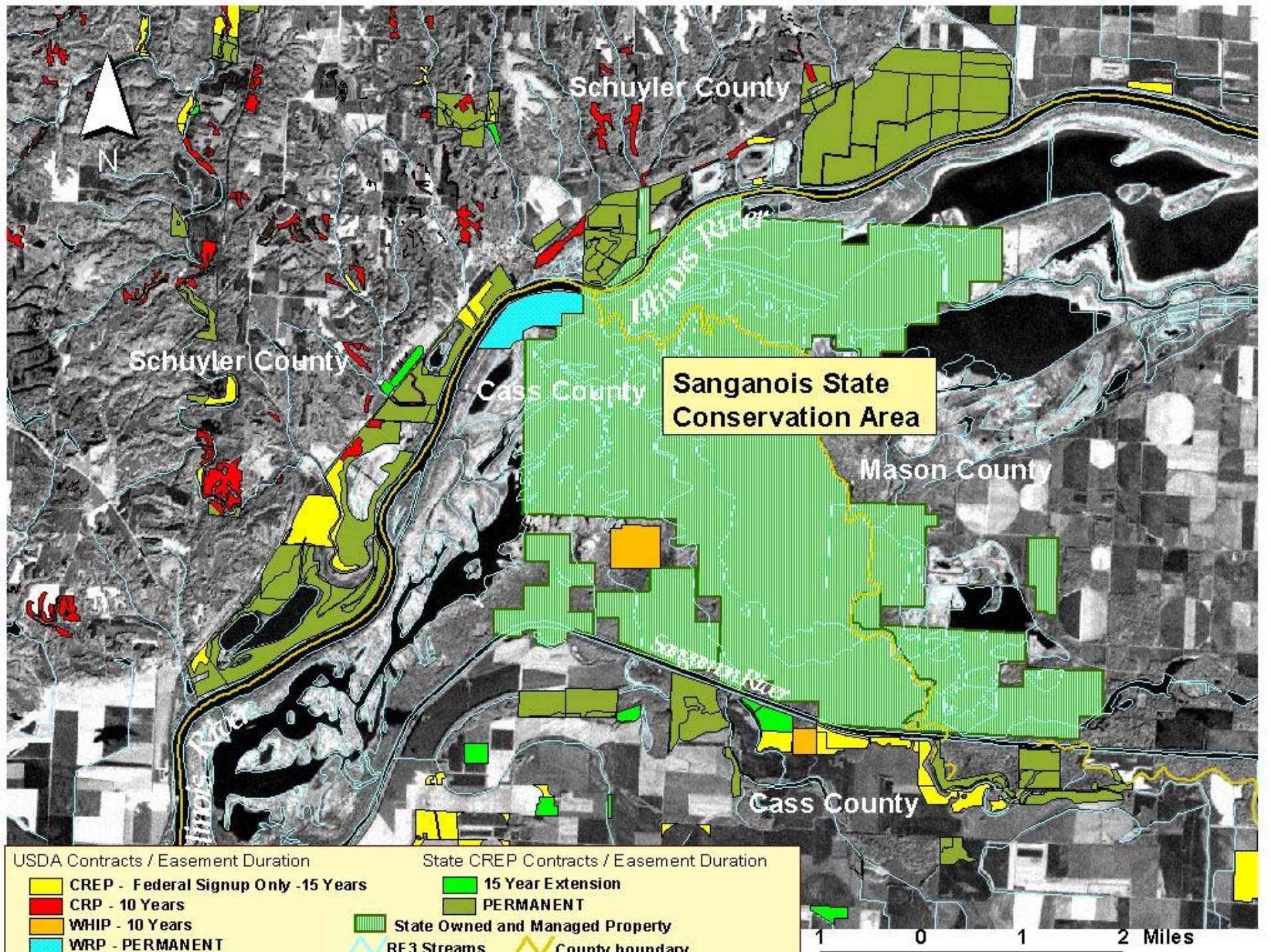
An approach to coordinating conservation A multi-agency information within Illinois



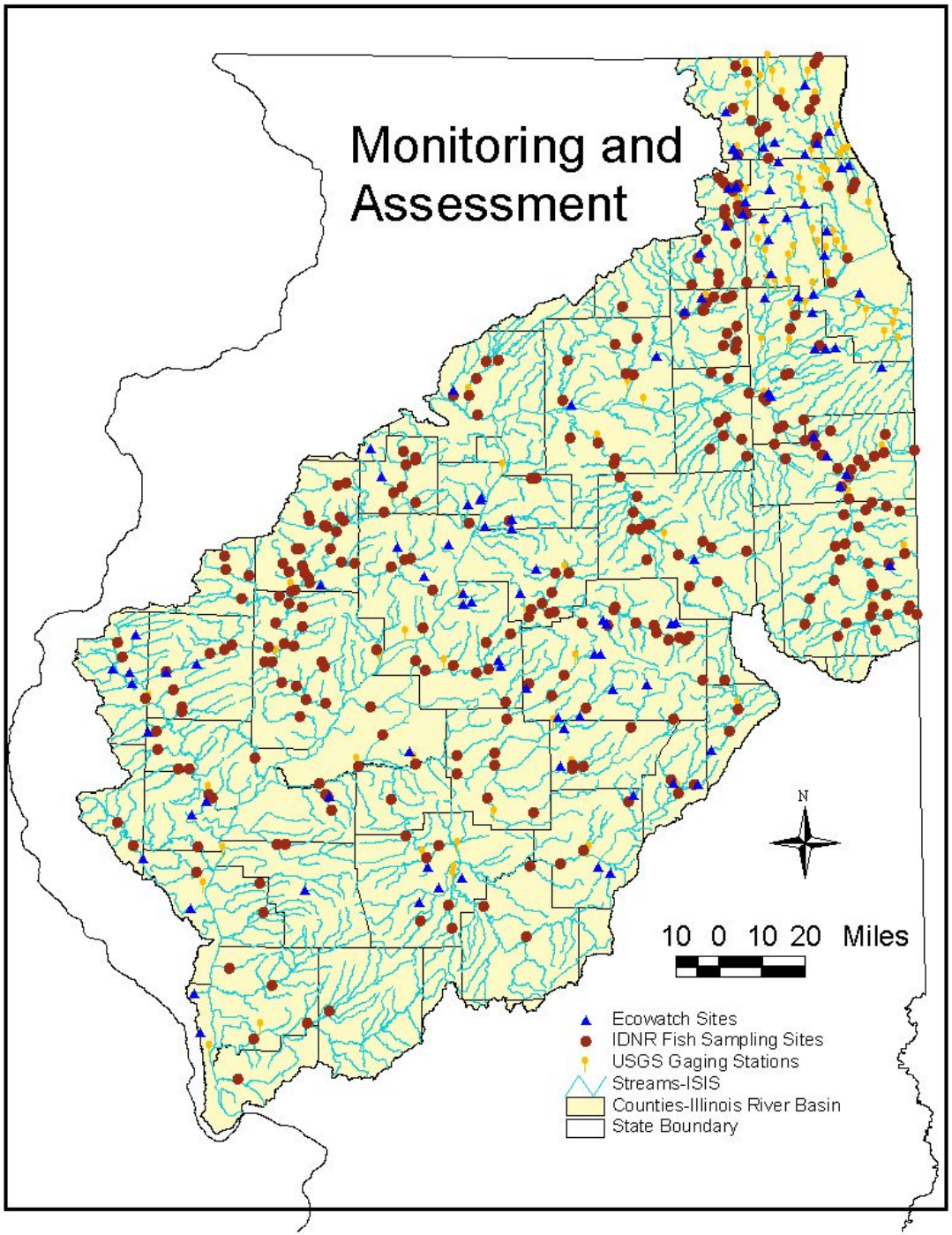


Conservation Programs Documented by ICPTS

- USDA CREP
- State of Illinois CREP
- Conservation Reserve Program (CRP)
- Environmental Quality Incentives Program (EQIP)


N
Schuyler County
Schuyler County
Cass County
Sanganois State
Conservation Area
Mason County
Cass County
Illinois River
Spoon River
Illinois River
USDA Contracts / Easement Duration
CREP - Federal Signup Only -15 Years
CRP - 10 Years
WHIP - 10 Years
WRP - PERMANENT
State CREP Contracts / Easement Duration
15 Year Extension
PERMANENT
State Owned and Managed Property
RF3 Streams
County boundary
1 0 1 2 Miles

Evaluating the resources



Status of Illinois

- Last Open Enrollment was ended in November 2001 when Federal Acreage cap was reached and State Dollars were expended
- New MOA in December 2002 provides for 100,000 additional acres through December 31, 2007
- Spring 2004, another 7,045 acres of permanent easements were enrolled in State side
- Anticipate re-opening in September or October,2004

Monitoring Recommendations

- Conduct assessments of selected CREP easements to determine ecological performance
- Expand conservation mapping
- Expand modeling efforts
- Monitoring and assessments should continue through 2012

Further Recommendations

- Allow focus of CRP-CREP on HEL and upland areas
- Target HEL areas within whole field configurations
- Expand CREP statewide
- Need to address streambank stabilization
- Use of CRP-CREP for emergency haying and grazing in Illinois